

Attorney Docket: 3064Y0/50999
PATENTIN THE CLAIMS:

1. (original) A disk changer comprising:

B/ a slide tray made of resin in a square plate shape, the slide tray having a circular recess and rollers and being installed in a manner capable of being drawn out from a cabinet body, the circular recess being formed in an upper surface of the slide tray so as to face upward around a cylindrical support shaft, the rollers being arranged at equal intervals in three positions on a circumference on the upper surface of the slide tray which circumference is centered at the support shaft while allowing rotating shafts of the rollers to be oriented radially of the circular recess;

a disk tray made of resin, the disk tray having a tray axial bore formed axially thereof and into which the support shaft is inserted rotatably, an annular recess formed in an upper surface of the disk tray in a surrounding relation to the tray axial bore, disk receptacle portions formed circumferentially at equal intervals in five positions on the upper surface of the disk tray, and a ring gear disposed on a circumference on a lower surface of the disk tray which circumference is centered at the tray axial bore, the ring gear being engageable with a driving gear, the disk tray being placed in the circular recess of the slide tray while being supported at a peripheral edge of its lower surface and thereabouts by means of the rollers; and

a chuck arm made of resin, the chuck arm having an arm axial bore formed on one end side thereof and into which the support shaft is inserted, an annular recess formed in a lower surface of the chuck arm in a surrounding relation to the arm axial bore, the annular recess being able to confront the

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annular recess formed in the disk tray, and a through hole formed on an opposite side of the chuck arm and able to confront a central part of each of the disk receptacle portions, the chuck arm being mounted to the support shaft while allowing a spring to be accommodated within a space which is formed by making the annular recesses confront each other, the spring being disposed so that it can expand and contract axially of the support shaft.

2. (previously presented) A disk changer comprising:

a disk tray which accommodates a plurality of disks on a surface thereof;
a drive mechanism for rotating the disk tray;
a slide tray having a plurality of rollers which support the disk tray rotatably on a back side of the disk tray; and

a support shaft structure which urges the disk tray toward the slide tray while supporting the disk tray rotatably about an axis of the disk tray relative to the slide tray.

3. (previously presented) A disk changer according to claim 2, wherein the support shaft structure is provided with a spring, the spring being able to expand and contract in the axial direction of the disk tray, one end of the spring being spaced a predetermined distance from the slide tray and positioned there, an opposite end of the spring acting against the disk tray in a vicinity of the disk tray axis from the side opposite to the slide tray.

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4. (previously presented) A disk changer according to claim 2, wherein the disk tray is formed by molding while the vicinity of the disk tray axis is displaced away from the slide tray, causing the whole of the disk tray to be warped in an arcuate sectional shape.

5. (previously presented) A disk changer according to claim 2, wherein the slide tray portion opposed to the vicinity of the disk tray axis is depressed as a recess in a direction away from the disk tray.

6. (new) A disk changer comprising:

a slide tray made of resin in a square plate shape, the slide tray having a circular recess and being installed in a manner capable of being drawn out from a cabinet body, the circular recess being formed in an upper surface of the slide tray so as to face upward around a cylindrical support shaft;

a disk tray made of resin, the disk tray having a tray axial bore formed axially thereof and into which the support shaft is inserted rotatably, an annular recess formed in an upper surface of the disk tray in a surrounding relation to the tray axial bore, disk receptacle portions formed circumferentially at equal intervals in five positions on the upper surface of the disk tray, and a ring gear disposed on a circumference on a lower surface of the disk tray which circumference is centered at the tray axial bore, the ring gear being engageable with a driving gear, the disk tray being placed in the circular recess of the slide tray; and

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a chuck arm made of resin, the chuck arm having an arm axial bore formed on one end side thereof and into which the support shaft is inserted, an annular recess formed in a lower surface of the chuck arm in a surrounding relation to the arm axial bore, the annular recess being able to confront the annular recess formed in the disk tray, and a through hole formed on an opposite side of the chuck arm and able to confront a central part of each of the disk receptacle portions, the chuck arm being mounted to the support shaft while allowing a spring to be accommodated within a space which is formed by making the annular recesses confront each other, the spring being disposed so that it can expand and contract axially of the support shaft.

7. (new) A disk changer comprising:

a disk tray which accommodates a plurality of disks on a surface thereof, the disk tray having a recess formed on a back side about a rotational axis of the disk tray;

a drive mechanism for rotating the disk tray;

a slide tray which supports the disk tray rotatably on the back side of the disk tray, the slide tray having a recess formed on an upper surface facing the recess on the back side of the disk tray; and

a support shaft structure which urges the disk tray toward the slide tray while supporting the disk tray rotatably about an axis of the disk tray relative to the slide tray, wherein the disk tray recess and slide tray recess form a closed space when the disk tray is urged against the slide tray.